B. REMARKS

By this amendment, Claims 10-13, 17, 19-22, 32-37, 41, 43 and 44 have been canceled, new Claims 50-69 have been added and Claims 1, 14-16, 18, 23, 38-40, 42 and 45-48 have been amended. Hence, Claims 1-9, 14-16, 18, 23-31, 38-40, 42 and 45-69 are pending in this application. The amendments to the claims and the new claims do not add any new matter to this application. All issues raised in the Final Office Action mailed January 28, 2004 are addressed hereinafter.

REJECTION OF CLAIMS 1-9, 14-20, 23-31 AND 38-49 UNDER 35 U.S.C. § 102(b)

In the Final Office Action mailed on January 28, 2004, Claims 1-9, 14-20, 23-31 and 38-49 were rejected under 35 U.S.C. § 102(b) as being anticipated by *DeRoo et al.*, U.S. Patent No. 5,182,752 (hereinafter "*DeRoo*"). It is respectfully submitted that all of the pending claims are patentable over *DeRoo* for at least the reasons provided hereinafter.

CLAIMS 14-16, 18, 38-40, 42 AND 45-48

Claim 14, as amended, recites a method for maintaining data integrity that requires the steps of:

> "a software application performing a physical checksum calculation on a block of data;
> after performing the physical checksum calculation,
> a component other than the software application performing a first physical checksum verification procedure on said block of data prior to writing the block of data to a nonvolatile memory, wherein the first physical checksum verification procedure indicates whether the block of data was corrupted subsequent to the software application performing the physical checksum calculation on the block of data; and
> if the block of data passes said first physical checksum verification procedure, then causing the block of data to be written to the nonvolatile memory."

DeRoo describes an apparatus for transferring data between a data bus and a data storage device. Bus interface 10 processes data received from the data bus 9 and, under the control of the microprocessor 12, causes the data to be stored in linked buffers in RAM 16 if bus interface 10 does not detect any errors in the data.

It is respectfully submitted that Claim 14 includes one or more limitations that are not taught or suggested by *DeRoo*. For example, the method for maintaining data integrity recited in Claim 14 requires that a software application perform the physical checksum calculation. *DeRoo* describes that checksum circuit 24 performs checksum calculations on data received from byte parity checker 22. There is no mention or suggestion in *DeRoo*, however, of a software application performing a physical checksum calculation as required by Claim 14. It is therefore respectfully submitted that Claim 14 includes one or more limitations that are not taught or suggested by *DeRoo* and is therefore patentable over *DeRoo*.

Claims 15, 16 and 18 all depend from Claim 14 and include all of the limitations of Claim 14. It is therefore respectfully submitted that Claims 15, 16 and 18 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claim 14. Furthermore, it is respectfully submitted that Claims 15, 16 and 18 recite additional limitations that independently render them patentable over *DeRoo*.

Claims 38-40 and 42 recite limitations similar to Claims 14-16 and 18, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 38-40 and 42 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 14-16 and 18.

Claims 45-48 recite limitations similar to Claims 14-16 and 18, except in the context of apparatuses. It is therefore respectfully submitted that Claims 45-48 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 14-16 and 18.

CLAIMS 58-69

Claim 58 recites a method for maintaining data integrity that requires the steps of:

"performing a physical checksum calculation on a block of data;
performing a logical check on the block of data;
performing a physical checksum verification on the block of data, wherein the physical checksum verification indicates whether the block of data was corrupted subsequent to performing the physical checksum calculation on the block of data; and
if the block of data passes both the logical check and the physical checksum verification, then allowing the block of data to be written to a nonvolatile memory."

It is respectfully submitted that Claim 58 is patentable over *DeRoo* because *DeRoo* does not teach or suggest requiring successful performance of both a logical check and a physical checksum verification on a block of data as a condition for allowing the data block to be written to a nonvolatile memory, as is required by Claim 58. *DeRoo* describes performing parity checks but there is no mention of performing logical checks.

It is understood from the first Office Action mailed on September 11, 2003, that the parity checking performed by the checksum circuit 24 is considered to be a logical check as recited in Claim 58. It is respectfully submitted that a parity check is not a logical check. Like a physical checksum verification, a parity check is used to determine whether the bit pattern of a data block has changed. In contrast, a logical check is used to determine whether the meaning of a data block and/or its constraints have changed. Thus, it is respectfully submitted that *DeRoo* does not teach or suggest successfully performing both a logical check and a physical checksum

verification on a block of data as a condition for allowing the data block to be written to a nonvolatile memory, and that Claim 58 is therefore patentable over *DeRoo*.

Claims 59-61 all depend from Claim 58 and include all of the limitations of Claim 58. It is therefore respectfully submitted that Claims 59-61 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claim 58. Furthermore, it is respectfully submitted that Claims 59-61 recite additional limitations that independently render them patentable over *DeRoo*.

Claims 62-65 recite limitations similar to Claims 58-61, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 62-65 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 58-61.

Claims 66-69 recite limitations similar to Claims 58-61, except in the context of apparatuses. It is therefore respectfully submitted that Claims 66-69 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 58-61.

CLAIMS 1-9, 23-31 AND 49-57

Claim 1 recites a method for maintaining data integrity that requires the steps of:

"generating checksum data by performing a physical checksum calculation on a block of data;
after generating said checksum data,
performing a logical check on data contained within the block of data; and
if the block of data passes said logical check, then causing the block of data to be written to nonvolatile memory."

It is respectfully submitted that Claim 1 is patentable over *DeRoo* because *DeRoo* does not teach or suggest maintaining data integrity by performing a logical check on a data block after a physical checksum calculation has been performed on the data block. *DeRoo* describes performing parity checks but there is no mention of performing logical checks.

It is understood from the Final Office Action that the parity checking performed by the checksum circuit 24 is considered to be a logical check as recited in Claim 1. It is respectfully submitted that a parity check is not a logical check. As described herein with respect to Claim 50, a parity check is used to determine whether the bit pattern of a data block has changed. In contrast, a logical check is used to determine whether the meaning of a data block and/or its constraints have changed. Thus, it is respectfully submitted that Claim 1 includes at least one limitation that is not taught or suggested by *DeRoo* and is therefore patentable over *DeRoo*.

Claims 2-9 all depend from Claim 1 and include all of the limitations of Claim 1. It is therefore respectfully submitted that Claims 2-9 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claim 1. Furthermore, it is respectfully submitted that Claims 2-9 recite additional limitations that independently render them patentable over *DeRoo*.

Claims 23-31 recite limitations similar to Claims 1-9, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 23-31 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 1-9.

Claims 49-57 recite limitations similar to Claims 1-9, except in the context of apparatuses. It is therefore respectfully submitted that Claims 49-57 are patentable over *DeRoo* for at least the reasons set forth herein with respect to Claims 1-9.

In view of the foregoing, it is respectfully submitted that all of the issues raised in the Final Office Action mailed on January 28, 2004 have been fully addressed. It is further respectfully submitted that all of the pending claims are patentable over *DeRoo* and are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

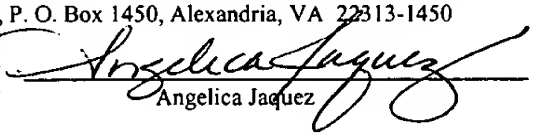
HICKMAN PALERMO TRUONG & BECKER LLP

Edward A. Becker
Reg. No. 37,777
Date: April 15, 2004

1600 Willow Street
San Jose, CA 95125
(408) 414-1204
Facsimile: (408) 414-1076

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **Mail Stop RCE**, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

On April 15, 2004 by 
Angelica Jaquez